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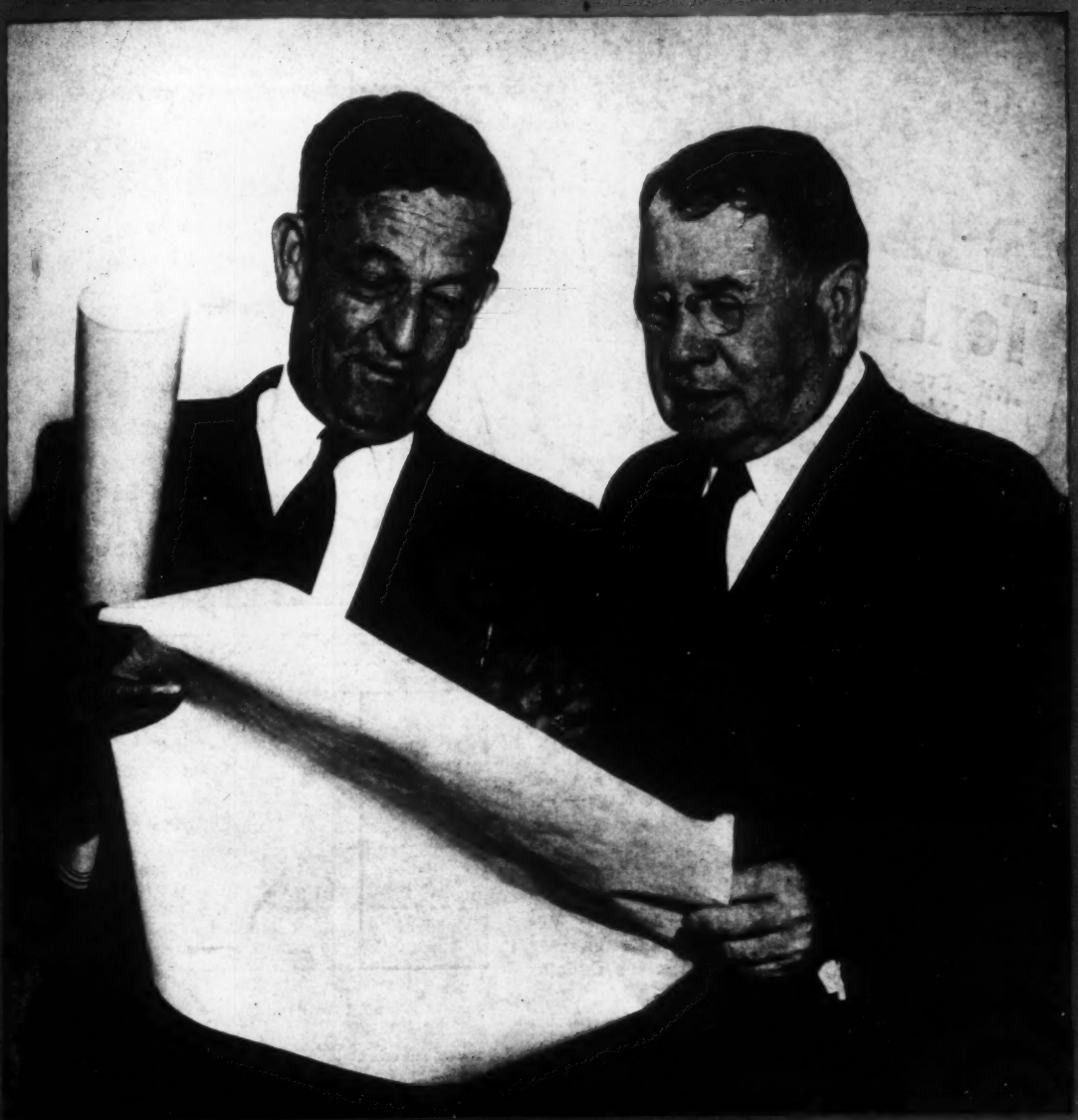
ENGINEERING NEWS-RECORD

AUGUST 26, 1948



Honolulu's civil engineer Floyd Judge Wilson, right, consults his chief

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News of the Week

ENGINEERING NEWS-RECORD • AUGUST 26, 1948 • VOLUME 141 • NUMBER 9

Joint board settles disputes in AFL building trade unions

Voluntary machinery, representing construction workers and AGC, gives two decisions on jurisdictional disputes—New rulings applicable to entire industry

Four jurisdictional disputes, involving two issues, were settled this week in the construction industry. Decisions announced by two joint boards are the first handed down under the voluntary machinery created last May 1 for settling AF of L union differences in the industry without work stoppages (*ENR*, Feb. 19, Vol. p. 235).

Each of the two decisions, both unanimous, involved two cases, one brought to the joint board by management and one initiated by a union. The decisions:

1. Installation of streamlined or other manufactured copper pipe or fittings for beer lines, wort lines, yeast lines, and CO_2 lines is the work of the plumbing & pipefitters union. Installation of copper attemperator coils in the interior of tanks and vats in breweries is the work of coppersmiths, members of the sheet metal workers international association.

2. Installation of steel decking for roofing if 10 gauge or lighter is the work of the sheet metal workers. Installation of steel decking for flooring is the work of the iron workers union. Whenever steel decking for flooring or roofing is used as a raceway for electrical wiring, the electrical work in connection with the raceway is that of the international brotherhood of electrical workers.

A third decision is expected soon involving a dispute between the plumbers and electricians over pre-heating and stress relieving of welds on high-pressure pipe.

The first decision involved disputes at Ballantine's brewery Newark, N. J., and Hamm Brewery Co., St. Paul. The Turner Construction Co. petitioned the joint board for a decision on the Ballantine job. The plumbers union brought the Hamm job to the board.

The second decision resulted from two cases brought by H. K. Ferguson Co., general contractors, involving a job at Decatur, Ill., and by the sheet metal workers involving a job by William L. Blanchard, General contractor, at Metuchen, N. J. The carpenters and electricians unions intervened to protect their interests in the issue involved in these cases.

Joint boards consist of two contractor and two union representatives, none of whom has an interest in the particular dispute, and John T. Dunlop, labor relations expert and Harvard economist, who sits as impartial chairman of all joint boards and the nine-man board of trustees.

Their decisions, as well as any agreements reached between the international presidents of disputing unions, become recognized as applicable, on a national basis, to all disputes on the same issue.

They are added to the 50 decisions and agreements already recognized by the AFL and published in a "green book." These precedents go back to the turn of the century and include decisions and agreements made or recognized by A F L conventions, the Building and Construction Trades Department., the national joint board for

(*Continued on page 6*)

New process promises cheaper steel

A revolution in steel making—with consequent reduction in steel prices—may be in the offing as the result of the development of a short-cut procedure for obtaining semi-finished shapes.

Republic Steel Corp. and Babcock and Wilcox Co. last week announced they had jointly developed a relatively inexpensive machine for continuous casting. Savings of at least $3 per ton in steel production are predicted. Moreover, by reducing capital investment for new steel mills, the new process may encourage greater decentralization of the industry.

The major advantage of continuous casting is the elimination of the most massive and expensive parts of the conventional plants—ingot equipment, soaking pits and blooming mills.

Although continuous casting has been successfully used for many years for non-ferrous metals, its application to steel has not been easy. Problems due to high temperatures, segregation, slag inclusion and necessary safety measures have discouraged investigators. Now, however, with the unit cost of steel continually rising, freight tariffs on scrap and finished steel becoming more bothersome, break-even points at dangerously high levels and capital costs increasing, investment of time and money in the development of the process is more attractive.

As performed at the Babcock and Wilcox plant at Beaver Falls, Pa., the operation sequence is as follows:

Molten steel from an electric furnace is lifted to the top of a 75-ft. tower in a transfer ladle and emptied into an electric induction ladle. The latter tips to pour the steel into a receptacle, where slag is removed. Then the metal is poured into a vertical water-cooled mold, from which the billet emerges into an insulated chamber that controls the speed of cooling. Below this chamber are pinch-rolls that regulate the speed of downward movement. Near the bottom of the tower an automatically-operated acetylene torch cuts a specified length from the billet, which is then lowered to horizontal position for removal.

A section of about 30 sq. in. has been used at this plant, and is considered satisfactory for commercial production at a rate of 400 lb. per min. A mold for a 45-sq.-in. section is being made.

Ovals of special proportions appear to be the most practicable shape for continuous casting, and will readily go into a rolling mill for shaping into rounds or rolling into flats.

NEWS BRIEFS

Highways—*Indiana* State Highway Commission will ask for an appropriation of $38,685,000 for the 1948-49 fiscal year . . . Work has started on a $500,000 bridge over the barge canal at *Rochester, N. Y.* . . . Commissioners of *Wayne County, Ind.*, are considering the construction of new bridges over the Whitewater River at Richmond and over the west fork of the Whitewater at Cambridge City . . . *Montana* awarded highway contracts of $4,798,000 in the first half of this year.

Housing—Work will start next month on a large shopping center at the Glen Oaks Village apartment development on *Long Island, N. Y.* . . . A mass moving of 63 of the 150 dwellings to be razed to make room for the Mystic River bridge approaches in *Charlestown* and *Chelsea, Mass.*, may be undertaken . . . Massachusetts Housing Board recently approved a 72-unit apartment house in *Roxbury* estimated to cost $905,626 and also a 648-family development in the *Brighton* district . . . United Veterans Council housing committee at *Youngstown, Ohio*, has taken an option on 90 acres on the West Side for a $1,000,000 housing project . . . *N. Y. City's* Board of Estimate has approved the financing contracts for the Nostrand, Glenwood, Boulevard and Sedgwick houses, and the sites and preliminary plans for Marble Hill, Boulevard and Ravenswood homes in the veterans' program of public housing. Other housing developments in the metropolitan area include—a *New Hyde Park* project to cost $4,000,000 and 2,000 homes for rent to be built by Levitt & Sons at *Levittown, L. I.*

Public Construction — Missouri School of Mines and Metallurgy, *Rolla, Mo.*, plans new buildings to cost $1,287,000 . . . Work is to start at once on the first unit of a $1,000,000 Catholic high school at *Great Falls, Mont.* . . . Baptist Memorial Hospital will be erected in *Kansas City, Mo.*, at a cost of $2,000,000 . . . Voters of *Niles, Ohio*, will vote on a $500,000 bond issue, *Brookfield* on $465,000 and *Painesville* on $750,000, all for schools. Bond issues of $1,600,000 in *Marion County*, and $500,000 in *Knox County* for hospitals will also be voted on . . . Medicine Creek Dam at *Cambridge, Neb.*, a $7,000,000 project, has been dedicated. . . . Board of Regents of the university system of *Georgia* has recommended that the governor and the general assembly appropriate $10,000,000 annually for new construction and general operation . . . The three buildings now being erected for the Supreme Court, the Industrial Commission and the road department of Florida probably will not be finished before the end of the year . . . There will be a special bond election for a proposed $2,684,000 issue for a new high school in *Johnson County, Kan.* . . . Ground has been broken for a $3,210,000 men's dormitory at Oklahoma A & M College, *Stillwater*.

Industrial Construction — Central Vermont Public Service Corp., which suffered severe losses in the flood of June, 1947, in *Rutland* and vicinity has completed a permanent financing program and proceeds are being used for reconstruction and for the company's new construction program. The corporation furnishes electricity for 173 Vermont communities . . . The new $600,000 marketing terminal of The Standard Oil Co. (Ohio) at *Tiltons* will be completed within 30 days . . . Eastman Kodak plans erection of a $750,000 building at *Rochester, N. Y.* . . . A multi-million dollar plant for industrial rubber belting will be built in *Akron, Ohio*, by The B. F. Goodrich Co. . . . U. S. Steel Corp. and the Mellon interests plan a 37-story building for Fifth Ave., *Pittsburgh, Pa.* . . . Sears, Roebuck & Co. is planning a $3,500,000 store in West End, *Atlanta, Ga.*, with parking space for 400 cars.

Water Supply and Sewers—*Junction City, Kan.*, has installed a $262,000 water softening and filtration plant . . . Preliminary work has started on the Dead River water storage project of the Central Maine Power Co. at *Flagstaff*. The $4,800,000 dam will create a lake 26 miles long and three miles wide . . . A new Big Creek water supply project to triple daily capacity has been announced at *Mobile, Ala.* . . . *Sarasota, Fla.*, has a $1,800,000 sewerage project . . . According to the State Board of Health, *Indiana* has spent more than $40,000,000 for sewerage improvements since 1943 . . . Construction has begun on a $500,000 storm sewer between the new river flood wall and the rear of Water St. buildings in *Elmira, N. Y.* . . . *Utica, N. Y.*, has a sewage disposal plant program of $3,000,000 which cannot be undertaken without state or federal aid . . . Proposal to allow a private company to operate and maintain the *Lake County, Ohio*, water service systems is being studied by officials. Ashtabula County, which supplies water to the Madison-on-the-Lake area, has given notice that it can not continue the service after April 15, 1949.

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Jet engine fuel found serious hazard to asphalt pavements, joint sealing

Effect of heat blast on either asphalt or concrete pavement seen to be secondary problem to destruction by kerosene fuel used

Jet plane fuel, spilled on airport pavements, is a far more serious source of damage than any other in the use of this type of engine, according to the Corps of Engineers and the Air Force (*ENR* Aug. 5, p. 59).

Heat and blast effects of the jet engine are a lesser problem, but Air Force engineers who maintain the airfields built by the Corps of Engineers state that a parked plane running its jet engines for 10 or 15 minutes in one spot can soften bituminous pavement and damage its serviceability. This is so because, depending upon plane loading, the jet discharge pipes may point downward as much as 5 to 7 deg. below the horizontal.

The real difficulty is fuel spillage. That problem has been mastered in simple fashion, so far as asphaltic concrete pavements are concerned. A 1-in. or thicker surface course of dense-graded, plant-mix, coke-oven tar concrete will prevent damage to asphalt pavement, even on an apron. For less expensive construction, Air Force engineers say that a heavy double surface treatment of tar binder and fine aggregate has given indications of satisfactory protection. No final answer has yet been found to the problem of joint sealing for concrete slabs.

Coke oven tar offers protection

Use of coke-oven tars is important. The kerosene fuels burned in jet engines come from the same petroleum that is the base for most asphalt. They have a natural affinity for the asphalt and, because they evaporate slowly (some having inhibitors in them), they do a superlative job of dissolving the asphalt binder and softening the pavement. Coke-oven tars, on the other hand, coming from coal, have little attraction for kerosenes made from petroleum, and these tars stand up stiffly against kerosene attack.

Dense grading of the protective surface course is necessary for the same reason. A coarse-graded tar concrete holds the spilled fuel, letting some work through to the asphalt.

Coke-oven tars would do for the joint seals in Portland cement concrete pavement if they had the other qualities needed, but they become brittle in cold weather and lose elasticity with age.

Materials such as premolded rubber, tar-impregnated fiber, and redwood are satisfactory as joint filler, but the joints in addition must have an elastic seal to remain tight in a broad expanse of apron pavement.

Future designs of jet engines and of plane fueling systems may modify or remove the hazard, but the airport construction and maintenance engineers have no assurance of such development. Ever since the effect of jet fuels on asphalt became apparent, the Corps of Engineers has been conducting tests: (1) to find products that will protect existing pavements, and (2) to determine fuel-proof design for the future.

Laboratory tests of products are going on at the flexible pavement laboratory, U. S. Waterways Experiment Station, Vicksburg, Miss., with full-scale experimental installations at Air Force bases.

The studies have brought out some promising products: oil-resistant rubbers and several proprietary items, in addition to the coke-oven tars. The Corps of Engineers intends to continue the tests as long as there is need, with any modifications that may be indicated by changes in operating conditions or fuel types for jet planes.

Administrator appointed for Alaska airports

Chris M. Lample, one of the veterans of the Civil Aeronautics Administration, is slated for the new post of administor of Alaska International Airports. Engineering contracts for ports at Anchorage and Fairbanks were awarded recently, and advertising for construction bids is scheduled for September. The new administrator will act as advisor and consultant during the engineering and construction stages, and will operate the two fields when completed, under the CAA, in the same way that the agency runs its single present airport—Washington National.

UNDERGROUND EXPLOSIVE TESTS—Blasting dry sand and clay with charge of 320 lb. and 2,560 lb. of TNT, Army Engineers continue extensive experiments at Dugway Proving Grounds in Utah (*ENR* Aug. 5, p. 59).

FOREIGN DEVELOPMENTS

Tel Aviv—Hoping, sometimes dimly, for peace in the Holy Land, political leaders look forward to a general reconstruction of Middle East economy. With that in view Walter Clay Lowdermilk, one time assistant chief of the Soil Conservation Service of the United States, has again called attention to his scheme for a Jordan Valley Authority to benefit Palestine, Transjordan, Syria, Egypt and the Lebanon. (*ENR*, May 9, 1946 Vol. p. 753).

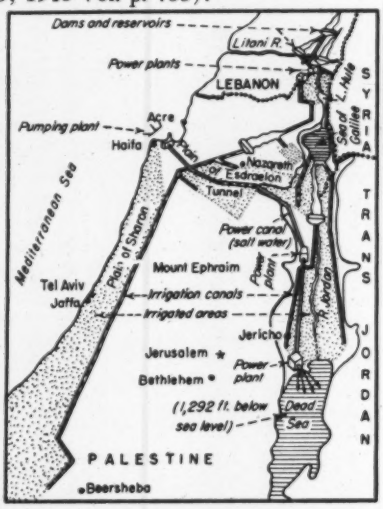
The purpose would be to irrigate large tracts of present wastelands, and to provide ample cheap power for the development of modern industry in those regions. It is hoped that this would make possible larger scale Jewish immigration and raising of the general level of the Arab standard of living.

The costs would be borne by the governments of Israel and the surrounding Arab states, aided by large loans from the Western powers.

The Dead Sea lies in a trough 1,300 ft. below sea level. It is proposed to draw in the waters of the Mediterranean to create a great power project using the Dead Sea as a huge evaporation pan, first taking out the sweet waters of the Jordan and its tributaries to use for irrigation.

It is said that it would be a comparatively simple engineering problem to conduct Mediterranean Sea water into the Dead Sea through a canal and tunnel. Taking advantage of the great difference in levels hydroelectric power plants would be built along the way. With additional power to be developed in connection with the irrigation, it is estimated that electrical energy could be obtained equivalent to one-fifth that generated at Hoover Dam.

In 1947 the Palestine Electric Corp. sold 286,045,000 kwh. of electricity; and the Jerusalem Electric and Public Service Corp. 22,034,000 kwh. Divided as to users, the sales of the Palestine Electric Corp. in 1947 were: For industry 89,300,000 kwh.; for irrigation, 75,700,000 kwh.; and for lighting, etc., 121,000,000 kwh.



MID-EAST PROJECT—Proposed Jordan Valley Authority would benefit many countries in need of irrigation.

Public Works

India—A $48,000,000 project to increase Bombay's water supply by another 220 mgd. has been approved. This will alleviate the present situation which finds the city getting only about 125 mgd. of the 236 mgd. required. The job involves driving a 10-ft. tunnel 21,600 ft. long and constructing a 96-in. pipeline 6½ miles long.

A separate housing department has been formed by the Government of India under the Ministry of Health. Prime Minister Nehru has recently announced plans to factory-build prefabricated houses to aid in a housing problem made worse by the large influx of refugees from the county of Pakistan.

Plans include a prefabricated house with no steel and little concrete to sell for the equivalent of $750.

Mexico—Funds immediately available for public works are announced to be $12,000,000. The National Urban Mortgage and Public Works Bank at Mexico City will spend $7,500,000 on various municipal water and drainage construction, and $4,500,000 will be used on irrigation works under supervision of the Hydraulic Resources Ministry.

Transport

Colombia — The governments of Colombia and the United States have agreed upon reconnaissance by air, land and river of the Atrato-Truando interoceanic canal route, in the northwest sector of the country at the base of the Isthmus of Panama. The survey will begin by Oct. 1 and will take five or six weeks to complete, according to an announcement by the U. S. State Department.

Chief purpose of the investigation is to obtain preliminary estimates of cost for comparison with other locations studied last year by the consulting engineer group for Brig. Gen. Joseph C. Mehaffey, who recently retired as Governor of the Panama Canal (*ENR*, May, 1, 1947, Vol. p. 740). The governor's report was sent to Congress by the President December 1 (*ENR*, Dec. 11, 1947, Vol. p. 787).

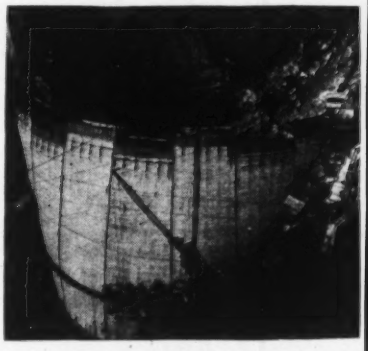
Additional study of the Colombian route was requested by Army Secretary Kenneth C. Royall after his visit to Panama in February, after The Panama National Assembly last December refused to renew U. S. Army leases on airbases that protect the present canal.

General Mehaffey's report estimated the cost of a lockless 500-mile freshwater canal on the Atrato-Truando route through northwest Colombia at $4,900,000,000 and ruled it out of consideration. At the February conferences in Panama, it was decided to get more data on this route. The Mehaffey report recommended that the present canal be deepened to a sea-level waterway.

A mixed commission of Colombian and U. S. engineers will make the new reconnaissance. Two groups will make the land and river investigations, one starting at the Pacific end and the other at the Caribbean.

India—Construction of one of the world's highest roads is claimed by engineer units attached to Indian forces fighting in the mountain state of Kashmir. Working 24 hours a day for six weeks, and using six tons of explosives in the process, they successfully widened and graded for motor vehicles a pack-animal trail to the peak of 12,000-ft. high Razhainagan Mountain, with the aid of 400 local laborers.

Argentina—Six new hangars for the Argentine National Airport, Ezeiza, will



POWER IN THE ITALIAN ALPS—On the Northern Tagliamento River in the Italian province of Udine, near Trieste, the Societa Adriatica di Elettricita has completed this hydro-electric plant which furnishes 100 million kwh. annually to the peninsula nation.

ARGENTINE NATIONAL AIRPORT—This international reception center, with administration building in the background to the left, nears completion as hangar and runway work continues on the $70,000,000 project at Ezeiza—one half hour by super-highway from Buenos Aires.

be designed by Roberts & Schaefer Co., of Chicago, and constructed by an Argentine builder at a cost of $8,000,000. The $70,000,000 airport is due to open in December.

Canada—Work on the 259-mile Hart Highway, which will connect the main British Columbia highway system with the Alaska Highway, has been delayed indefinitely. Soaring costs have made it impossible to complete the road—estimated to cost $6,000,000—at this time, but the Provincial government is at present studying possible solutions.

An appropriation of $1,600,000 for improvements in the St. Lawrence River harbor at Quebec has been made by the Dominion.

Tunnels

Union of South Africa—A specially trained tunneling team has broken its previous record at the Marievale Consolidated Mines, advancing 1,227 ft. in 26 working days.

Experiments with tungsten-carbide drills being performed in South African gold mines may lead to reduction in rock-breaking costs engineers say. The drills with 54-in. feed advance 18 in. a minute. The bits are being sharpened at the rock face with a diamond or green grit wheel.

England—Examination of plans for a Channel tunnel to link France and Britain has been urged in both Houses of the British Parliament. This desirable rail link between London and Paris has been under consideration for many years. (*ENR* April 17, 1930, vol. p. 658). Crossing under the 24-mile wide Straits of Dover to Calais, the tunnel would cost more than $150,000,000.

Bridges

England—Londoners have witnessed removal of another reminder of the past war. The 90-ton center span of No. 2 war emergency bridge across the Thames—which was never used—has been lifted on the incoming tide by means of trestles built on barges and has been towed ashore to be dismantled. The 140-ft. span is now destined for use over a tributary of the Zambesi River in Africa where it will carry a new road linking the capitals of Northern and Soutern Rhodesia.

Portugal—Dorman, Long and Co., Ltd., British builders of the Stormstrom Bridge in Denmark—longest in Europe—have contracted with the Portuguese government to bridge the River Tagus, 20 miles above Lisbon, with a $4,800,000 highway span. The steel for the five 340-ft. steel arch spans will be rolled and fabricated in Britain.

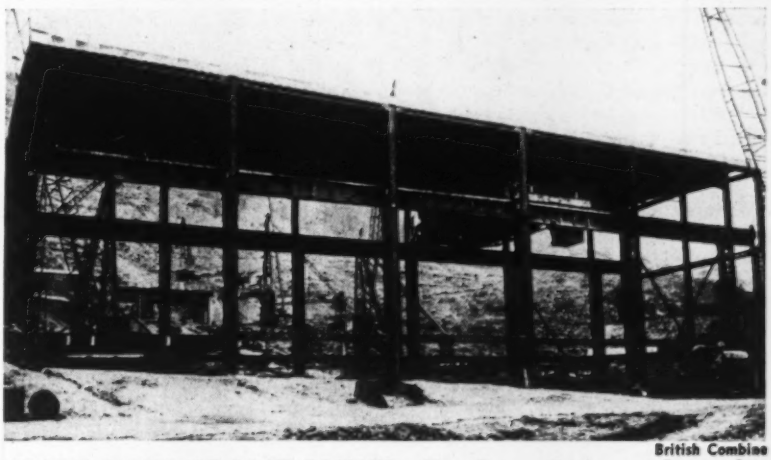
Miscellany

Australia—A 24-in. 70-year old cast iron gas feeder main has been lowered 12 in. by the South Australian Gas Company over a distance of 1000 yd. without interrupting the gas flow. Here is how it was done:

A small bulldozer cleared the earth down to the top of the main 12 in. below the surface. A power shovel then cut a trench along one side of the main down to the new level. The main was propped up with sloping timbers that were inserted in the trench. The earth under the pipe was then excavated by hand labor between the props. The new bed was back-filled with sand and watered in.

Withdrawal of the beams allowed the main gradually to sink to its new level. After it had come to rest on the new bottom, the lead joints were caulked with a compressed-air hammer with suitable attachments.

Also in Australia, two methods of deadening noise of an overhead railway will be combined at Sydney. First, rails will be placed on supports built up of two layers of felt, two layers of sheet lead, two layers of concrete, bitumen, heavy building paper, and rock asphalt. The second noise reducer entails spraying limpet asbestos paint on girders, and other members of the overhead structure to a thickness of half an inch.



British Combine

ON THE BANKS OF LOCH LOMOND—Sloy Power Station at Inveruglas, Scotland, will be completed and generating by next year. Waters from Loch Sloy, piped down the slope in background, will reach the turbines with a pressure of 400 psi.

See need for new public works plans as U. S. surveys hedge against slump

Politicians seen agreeing on need for bolstering construction planning to forestall possible depression, but little concrete action taken

Vincent B. Smith

Come another depression, the federal government certainly will try again to spur construction of public works—local, state and federal—by regular contract methods. The last time the government tried to expand state and local construction—by setting up the Public Works Administration and its successors, including WPA, under the National Recovery Act in 1933—its good intentions were frustrated by lack of plans and specifications for public works projects.

Both the Democratic and the Republican high command accept the fact that the federal government will have to try the same scheme, or a similar one, if construction slides into another slump. It won't go down alone: the rest of the business economy will be sinking at the same time. But, aside from some thinking and talking, very little is being done to prepare for a better try next time.

First attempt halted

A federal advance planning program was started in 1945 to spur completion of state and local public works plans as a cushion against the recession expected after war-production contracts were cancelled. Congress shut off the federal advances when the recession failed to develop.

Since that time, the thinking with regard to advance planning has changed. A backlog of public works plans is now put forward as a means of sustaining construction volume in event of a general business slump.

During the two years the federal advance-planning incentive was in effect, the Federal Works Agency approved more than 7,000 applications for specific projects and made advances totaling nearly $60,000,000 to state and local governments to prepare the plans and specifications for these projects.

Estimated public work cost of all these approved projects is close to $2,500,000,000. On March 31, 1948, plan preparation had been completed for more than 3,600 of these projects, with a total estimated cost exceeding $830,000,000.

When the federal incentive program ended on June 30, 1947, the FWA deferred any further action on nearly 2,300 applications having a total estimated cost of something more than $1,000,000,000.

Nothing is being done by the federal government today to build up a backlog of fully planned works ready to go in case of a slump. Congress does not give federal agencies money for that kind of planning. So far as is known, no state or city is building a backlog to use in another depression.

Public works in a depression

Construction has its limitations as a stabilizer of business in a depression. Plunged into a slump, about the best that government can hope to do is to hold public construction at normal volume or possibly expand it slightly. In a general business decline, construction's most useful role will be to keep itself steady. At present it is employing about 2,400,000 workers, according to the Bureau of Labor Statistics. It cannot be expected to absorb the six to seven million who would be released by other industries during a depression.

The FWA estimates that a backlog of local and federal public works totaling to $6,125,000,000 would be needed at the start of a depression if that type of work is to be used to stabilize conditions in the construrction industry alone.

Normally, public work makes up 30 to 33 percent of all construction. At present this is down to 23 percent.

Over the long pull, FWA officials expect to see about $5,000,000,000 per year of public works construction—one-third of a $15,000,000,000 annual construction volume. To sustain this rate requires in itself an active backlog of completed plans for projects adding up to several billion dollars.

In the proposed live stockpile of completed plans for public works, distribution of the plans among the various classes of construction is important. It would not do to have the reserve stock overloaded with heavy river control projects, for example. These projects may take three, four or five years to build, and they probably will not come to peak employment for at least 18 months after work begins. They are extremely useful, though, for the long haul through a depression.

Highway construction will not catch up with highway needs in 15 years—if ever. For the state systems alone in 42 states the improvements now needed come to $20,000,000,000. These highways account for only 505,000 miles out of a total of about 3,300,000 miles of all classes of streets and roads in the United States.

Highway construction is pushed regularly at the fastest rate that financing—state, local and federal-aid—will permit. A going organization of state and local government departments and road-building contractors handles this fairly steady annual volume of construction. The turnover in completed plans is rapid. In another depression, one of the first efforts of government would be to sustain the normal volume. Swift expansion beyond that rate would be difficult.

The situation today

Total value of public projects for which blueprints had been completed June 30, 1947 was estimated at $4,500,000,000.

The federal advance planning program expired on that date, and FWA has had no money or authority to make later surveys. It is the hopeful opinion of FWA officials that the project value of plans completed since that date is about equal to the project value of plans taken down from the shelf and put into constrruction. In other words, they estimate the backlog of completed plans today to be about equal to what they were on June 30 of last year.

In total, the assumed existing shelf of completed plans looks good, but analysis of its components shows them to be badly out of balance, when compared with needs.

AFL disputes settled

(*Continued from page 1*)

jurisdictional awards which functioned in the early 1920s, arbitrators John A. Lapp and Peter Eller and, lastly, decisions by William L. Hutcheson, president of the carpenters, as national referee for the Building Trades Executive Council.

Joint boards are appointed to conduct hearings on a particular issue only after the board of trustees decides that the dispute is not covered by any decision or agreement "of record" and Richard J. Gray, president of the AFL Building and Construction Trades Department, has been unable to work out a voluntary agreement between the heads of the unions involved.

More than 2,000 contractors have signed stipulations agreeing to be bound by the provisions of the joint board procedures. Although the plan is the product of an agreement between the AFL building trades unions, the Associated General Contractors and seven specialty contractors, it may be utilized by any contractor employing AFL members if he signs a stipulation to be bound by the decision.

Sanitation to top UN health program

Sanitary engineering won first priority rating in the future program of the United Nations' World Health Organization during the recent five-week meeting of its first world health assembly in Geneva, Switzerland. The work of the United States delegation and its advisors was largely responsible for getting environmental sanitation (sanitary engineering) and nutrition into the top priority group.

Representatives from 53 member nations—eight of them from behind the "Iron Curtain"—attended this first organizational assembly. The total membership at present includes 56 countries.

During its five-week sessions, the assembly: (1) set up its permanent headquarters in Geneva, (2) elected a director general for a five-year term; (3) approved a $5,000,000 budget for 1949; (4) assessed the member nations for their financial contributions; (5) defined six geographic regions to be served by regional offices; and (6) selected Alexandria, Egypt, as the site of the regional office for the eastern Mediterranean area—the first office to be established.

In addition, the assembly, at its tenth session, accepted the United States into full membership in the WHO. Special consideration had to be given the U.S. application because the Congressional joint resolution that authorized our joining reserved the right of the United States to withdraw from WHO on one year's notice.

The assembly's unanimous action on giving top priority to environmental sanitation recommended that WHO set up a special committee and a section to deal with sanitary engineering in three divisions: (1) urban and rural sanitation and hygiene; (2) housing and town and country planning; and (3) natural resources. The recommendation prescribes that the staff of this section shall include at least one well-qualified sanitary engineer with field experience.

Dr. G. Brock Chisholm of Canada, who has been executive secretary of the interim commission of WHO during its two years of existence, is the newly elected director general of the organization. His staff at present comprises about 130 people. He was formerly surgeon general of the Canadian Army and later chief medical officer of Canada.

PERSPECTIVE . . . .

Congress checks on basing points

While the Federal Trade Commission goes ahead with its program of breaking up basing-point price systems under the terms of the Supreme Court's decision on cement, a 40-man advisory commission in Washington is preparing to go to work on the problem.

The commission is in fact an investigating committee appointed to aid Senator Homer Capehart's Senate group which has been ordered to investigate the effects of the high court's decision which knocked out absorption of freight rates by the manufacturer in an effort to meet local competition.

Under the leadership of Melvin T. Copeland of the Harvard School of Business, who is chairman, at least seven members of the commission are executives of the companies affected by FTC's price-fixing cases. They are producers of cement, glucose, refractories and wire rope. Besides these manufacturers, the advisory commission includes producers of candy, sugar, rubber, chemicals, textiles, paper, machinery and air conditioning, users of steel and cement, building trades men, farm leaders, railroad men and general business interests.

Their task, as outlined by Sen. Capehart, will be to determine if sellers shall be permitted to:

1. Sell their products throughout the United States at a uniform delivered price; 2. absorb freight or any part thereof in sales to customers, in order to compete with competitors whose plants are located closer to the customer.

The advisory group will hold an open meeting on September 15 to hear from Mr. Capehart and Dr. Copeland, among others, and then hold closed meetings the same day to get specific instructions. They'll meet again in October or November to compare notes, and then submit a report to the Capehart group about the first of the year.

Something of the nature of this final report can be assayed from the tone of a general letter to all congressmen issued by Senator Capehart, and a news-conference release of last week.

He indicated that his own committee and its advisory group will investigate "the effect of this decision (on cement and basing points) on every segment of our population and the national economy as a whole."

The senator then released quotations from what he said was an increasing amount of mail being received by his committee, almost wholly critical of the decision and the FTC's further actions. Washington observers felt the tone of both pronouncements indicated a definite leaning away from the FTC's stand, and toward some remedy—by new law if necessary—for industry.

Permanent buildings going up at Harmon Field

The United States Army Engineers are converting Harmon Field, one of the four U. S. bases on Newfoundland, from war emergency to permanency. The engineers turned 8,000 acres of bog, rocks, swamps and pasture into an airfield with wooden structures covered with roofing paper. Now, those are being replaced by buildings of concrete and lumber, with concrete foundations.

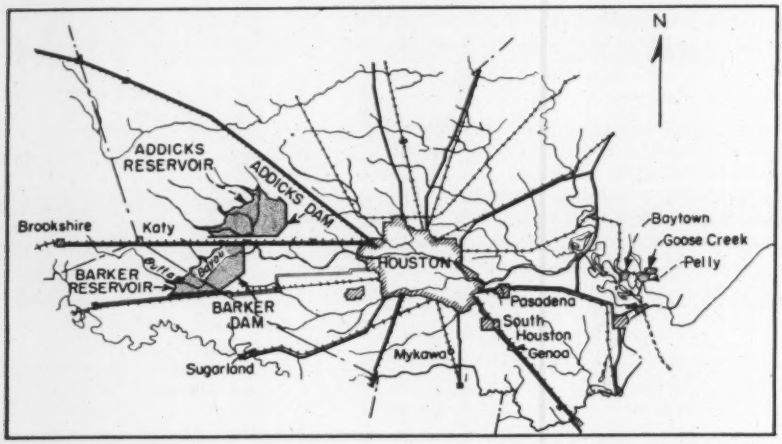
AASHO and AGC approve PR rule on 50% subletting

Over the objection of some of its members, the joint cooperative committee of the American Association of State Highway Officials and the Associated General Contractors has approved the recently amended regulation of the Public Roads Administration that permits a contractor to sublet up to 50 percent of the work on a federal-aid highway job. The favoring vote was taken at the committee's meeting in Portland, Oreg., recently.

Members favoring the new rule maintained that existing prequalification laws in most states will limit brokerage in highway construction effectively. A number of other states reported that they commonly allow 50 percent subletting on jobs not receiving federal aid.

The new regulation provides that a federal-aid contractor shall perform with his own organization work amounting to not less than 50 percent of the combined value of all items of work covered by the contract for each project. It exempts work requiring highly specialized knowledge, craftsmanship or equipment not ordinarily available in contracting organizations qualified to bid on the project.

MUNICIPAL AFFAIRS



FLOOD PROTECTION FOR HOUSTON—Map shows the extensive measures which are being taken to protect Houston, Tex., and its suburbs from floods by two of the world's largest earth-filled dams.

To be completed over two months ahead of schedule, Addicks Dam and the already completed Barker Dam will give Texas two of the world's longest earth-filled dams. Col. B. L. Robinson, district engineer of the Galveston District, Corps of Engineers, under whose supervision Addicks Dam is being constructed, said the project will be part of the Buffalo Bayou flood-control system during the current month. It will provide flood protection for Houston and its suburbs.

Located about 18 miles west of Houston, Addicks and Barker dams are part of an extensive flood control project designed to protect Houston and Harris County from the recurrence of floods which, in the past, have often proved disastrous.

Barker Dam, which was completed in 1945, is 13 miles long with a maximum height of 37 ft. and a reservoir covering 13,100 acres. Construction of Addicks Dam began in May, 1946, by the H. B. Zachry Construction Co. of San Antonio. The dam is 12 miles long and has a maximum height of 48.5 ft. Its reservoir will cover more than 11,600 acres of farmlands.

According to Norman W. Brown, resident engineer at Addicks, construction cost will be over $6,000,000.

Much of the 24,700 acres of land purchased by the Corps of Engineers for right-of-way and reservoir construction will be leased for grazing and farming purposes, and 75% of all money collected will find its way back to state and county tax collectors for school and road improvement.

The Buffalo Bayou channel below the dams is being improved by the McGinnes Brothers Construction Co., Houston, at a cost of about $500,000.

Nearly $10,000,000 has already been spent on the project by the Corps of Engineers, including $2,900,000 furnished by the Harris County Flood Control District.

Harris County, through a $9,000,000 bond issue voted in November, 1944, is carrying out a countywide drainage program, under direction of R. J. Putney, county flood control engineer, in cooperation with the Corps of Engineers.

Barker and Addicks dams are the first projects of an extensive flood control program designed by the Galveston District of the Corps of Engineers to control the flood waters of Buffalo Bayou and some of its tributary streams.

Capital improvements

Increasingly concerned with the financial problems involved in the vast improvements in physical structure demanded by new conditions, city governments are examining costs of proposed work with great care.

For example, New York City officials working on the city's capital outlay budget for 1949, took up the pressing problems of waterfront rehabilitation and sewage and garbage disposal. These three items have urgent priority, but the extent to which their financial burden can be removed from the budget and the capital program for the next five years will determine how much money will be available for other essential projects, such as new schools, hospitals and health clinics, and additional rapid transit improvements.

Robert Moses, city construction coordinator, has proposed a $40,000,000 program designed to eliminate in three years the use of waste materials in city landfills by the modernization of existing incinerators and construction of additional plants. Part of the program would include the development of new park lands to cost $5,700,000 through use of incinerator-ash as landfill.

In Cleveland, at the Nov. 2 election, voters will decide on a proposal to issue $45,600,000 in bonds to finance capital improvements. At the same time voters of Toledo will be asked to approve an amendment to the present payroll-income tax ordinance to permit revenue from that source to be diverted into various capital improvements. Besides reducing the bonded debt by $6,500,000, the amendment, if approved, would provide for a $2,000,000 street and sewer program; $4,180,000 of public works; expanded recreational facilities, and more than half a million dollars would be made available for building public schools.

According to a recent estimate, it would cost $65,000,000 for the repairs and new construction needed by Buffalo, N. Y. For various reasons, the city has put off needed improvements and repairs until many miles of its streets now are in very poor condition, its bridges and viaducts are limited to light loads, and almost the entire municipal plant requires attention. The city also has postponed expenditures for long-range programs such as waterfront development, new school buildings, playgrounds and other projects.

Airport developments

With airport construction and maintenance assuming a major role in municipal affairs, Miami, Fla., began negotiations to buy a 262-acre tract of land next to the city's International Airport to start off a $9,000,000 three-year expansion program to create one of the largest airports in the U. S.

The Port of New York Authority on Aug. 12 acquired the 500-acre Teterboro Airport in Bergen County, N. J., to bring under authority control every airport in the bi-state area capable of handling big commercial airliners. Teterboro is only about 25 minutes from midtown Manhattan by automobile, and last year handled an average of 500 planes daily. The Port Authority already operates La Guardia and Newark airports and the newly-opened Idlewild airfield.

In Houston, Tex., the way was cleared for the first major improvement at the municipal airport at a recent special city council meeting when plans for $552,800 worth of work in the south end of the field were approved. The city will furnish $365,800 and the federal government $187,000 toward the cost of the project.

Included in the plans authorized are a 2500-ft. extension to the northwest-southeast runway, making it 5,000 ft.; a new concrete apron or parking ramp in the hangar area, new taxiways connecting the hangar area with the runway; a storm sewer and drainage ditch; moving a drainage ditch; a new shell approach road and additional runway lights.

The city expects to get an additional $200,000 soon from the CAA which will be used in extension of other runways, new taxiways and lights, and a drainage ditch carrying water from the airport.

Aviation centering on the San Francisco airport brought that locality more than $32,000,000 worth of business last year, according to a recent survey. The Municipal Finance Officers Association observes that the survey by the San Francisco local government indicates generally the economic importance of airport facilities in most of the nation's 14 cities over 500,000 population. Of San Francisco's total aviation income during fiscal 1946-7, $17,750,000 was contributed by payrolls of commercial airlines.

Richmond's new charter

Richmond, Va., goes under the city manager form of government by a charter change effective Sept. 7.

The first city manager, at a $20,000 salary, will be Sherwood L. Reeder. Since 1944 he has been executive secretary of the Citizens Development Committee of Cincinnati. An engineering graduate of Syracuse University, he was formerly assistant city manager of Cleveland.

Smoke control

Denver, Colo., passed a smoke control ordinance to regulate "discharge of smoke and harmful or offensive gases," and creating the municipal office of smoke inspector.

St. Louis, Mo., and Erie, Pa., also are tightening smoke regulation. St. Louis aldermen decreed that industries, businesses and railroads must comply with new clean-air regulations within two years. The regulations cover commercial fly ash and "noxious gases, fumes and odors." Erie created a bureau of smoke abatement with an advisory board of three engineers. The bureau is given authority to determine whether dust, fumes or odors are creating a nuisance, and to enforce corrective measures.

A citizens' advisory committee on smoke control at Pittsburgh is about to report to the Allegheny County Commissioners on a plan to eliminate smoke created by railroads, heavy industry and power plants. It is hoped to have a new law passed affecting mostly heavy industry as most of the county's mills are outside the city of Pittsburgh and not affected by the city's present law.

WATER FOR LOS ANGELES—More than one-half of 2,000,000 cu. yd. of earth for Baldwin Hills Reservoir in southwest Los Angeles, has been removed to provide the basin as well as the material for the 650-ft. long earth-fill dam. A balancing reservoir, the lake will be fed by gravity flow from the Franklin Reservoir in the mountains back of Beverly Hills. The $4,500,000 project is under the direction of R. R. Proctor, field engineer. N. M. Imbertson is supervising engineer of inspection; Robert L. Brady, resident engineer, and Hugh Mulholland, superintendent of construction. Charles J. Itter is engineer of design, and Samuel B. S. Nelson is head of the water construction division.

Municipal Shorts

The Anderson, Md., board of public safety has approved the installation of 600 new parking meters, and it is likely that Topeka, Kan., will install 500 additional meters in the downtown area. . . . Long Beach, Calif., city officials are asking permission of the state board of health to open a new 23-acre fill-and-cover disposal area for rubbish in the Artesia area . . . The 100-year-old city hall of Mobile, Ala., is undergoing a thorough cleaning and paint job to be in keeping with the proposed new civic center, the first building of which—a $1,200,000 new city jail and police station—will get under construction within a month . . . Two present problems at Miami, Fla., are more adequate parking arrangements and the widening of downtown streets to take care of the city's growth . . . Attorney Richard Wait, president of the Massachusetts Bar Association, recently filed notice of an appeal in Suffolk Superior Court from the recent decision of the State Supreme Court, holding as constitutional the erection of a $5,000,000 garage under Boston Common. Mr. Wait said that the appeal would be based on the claim that Boston had held the Common in trust for the people by not permitting its commercial use for 300 years, and would violate that trust by accepting the $5,000,000 Parkman gift. . . . The Colonial Parkway tunnel at Williamsburg, Va., designed to carry traffic under the restored Colonial area of that city, is expected to be opened for traffic within the next two months . . . Saying that their bids are too high, Mayor D'Alesandro of Baltimore, Md., told paving contractors to hold open conferences with city engineers. Contractors objected to the plan on the ground that they don't want to reveal to competitors how they reach their costs.

Random Lines *from an editor's notebook . . .*

. . . Which outline the interesting story of John H. Wilson, the 76-year old engineer who is mayor of Honolulu

Fifty years ago, John H. Wilson startled the people of Hawaii and especially the engineers by submitting a bid of $37,500 for construction of the Pali Road. Today the same Wilson startles the islanders by being the very active mayor of Honolulu at the ripe age of 76.

Mayor Wilson's career has been as colorful as the islands where he was born. From running firearms into the islands in 1895 as part of a counter revolutionary plot to re-establish the old monarchy, to milking cows on his 60-acre farm every morning before going to his office, he has made the unusual his routine.

Walking into Mayor Wilson's office, the visitor knows he's not visiting the usual American mayor, but an engineer-mayor. Large drafting tables covered with blueprints take up considerable space. At one side is another table holding samples of his honor's present pet project—adobe bricks.

Early this year the Engineering Association of Hawaii voted to place a bronze plaque at the Pali Road site, back of Honolulu. Part of the wording reads: "This plaque is a testimonial to the ability and vision of John H. Wilson and Louis Whitehouse (the mayor's former partner) who undertook and completed the then considered formidable engineering feat. . ."

Mayor Wilson's engineering career began with civil engineering studies at Stanford University. These were interrupted when the monarchy was overthrown in 1895 and his father, a member of the royal court, had his income suddenly cut off.

It was then that the 23-year-old student became a member of a group which organized a counter-revolution and eventually sent an arms-laden ship back to the islands. It was captured when it tried to land.

A piccolo player too

Mayor Wilson's piccolo playing has helped shape his career. A Hawaiian band was forming to tour the mainland. Young Wilson saw his chance to visit large American cities and on the tour, when he wasn't playing his piccolo, he was looking at all the interesting and large construction projects he could find. In 1901 the band was an attraction at the Pan American Exposition in Buffalo, N. Y.

Returning to the islands in 1902 he began alternating private engineering and construction work with public office holding until 1919, when he became city engineer of Honolulu. During this time he designed and built roads, bridges, water works, buildings and railroads throughout the territory.

Before daylight each morning Honolulu's mayor milks three cows, eats breakfast, then heads for city hall.

In 1920, on the death of the then Mayor Joseph J. Fern, City Engineer Wilson was appointed mayor. He served as mayor until 1931, when he again started a cycle of interweaving public service positions—including a four-year term as postmaster—with his own enterprises.

Early in 1946 John Wilson announced he was ready to retire and he resigned his position as director of the territorial department of public welfare. He wanted to reside quietly on his ranch, experiment with his adobe brick, milk his cows and play his piccolo. But this was not to be, because when the Democrats looked around for a potentially successful candidate they couldn't see a chance for any of the younger politicos in the party.

His margin of victory was 16 votes. His opponents, charging a miscount, took their grievances to the territorial supreme court, which ruled in Mayor Wilson's favor.

Nearly everyone in Honolulu calls the mayor "Johnnie," and his ancestry is as democratic as his political beliefs. The mixture of nationalities in his blood is nearly as polyglot as Honolulu citizenry, for "Johnnie" is ⅛ Hawaiian, ¼ Tahitian, ¼ Scotch, ¼ Irish and ⅛ French.

Mayor Wilson's door is always open and no matter what rung of the social, political or financial ladder a visitor may occupy, he must wait his turn to see the mayor. *ENR's* correspondent found him with his feet up on his large koa wood desk—reading the morning paper—"seeing how my constituents feel about things."

Public works in Honolulu are getting all the backing the mayor can swing their way. He holds almost daily conferences with the city's chief engineer, Karl A. Sinclair. It seems logical that the people of a city should profit by electing an engineer for mayor.

He's a Democrat

Mayor Wilson has attended Democratic national conventions in 1912-16-28-32-36-40 and has just returned from Philadelphia after representing Hawaii at the latest convention.

He is charter member of the Engineering Association of Hawaii and was the organization's first president. A good argument can still be started among the membership if Mayor Wilson finds anyone doubting that he made money on the $37,500 he received for building the Pali Road. . . . *Staff.*

Alaska Road Commission expands for more work

Expansion and reorganization of the Alaska Road Commission's staff to handle an accelerated road building program was announced recently by Secretary of the Interior J. A. Krug.

Col. John R. Noyes, CE, USA, on loan from the Army, takes charge of the construction program, as commissioner of roads. Ike P. Taylor, Alaska road builder of 27 years experience, will remain as chief engineer of the commission.

Mr. Taylor joined the road commission in 1921 as an assistant superintendent, becoming chief engineer in 1932 when the commission was transferred to the Department of the Interior from the War Department. Colonel Noyes has an outstanding record as an engineer and transportation expert. Between 1926 and 1932 he served in Alaska, detailed to the road commission, when it was under Army jurisdiction. During World War II he was in charge of airfield construction in the south and later was transportation officer, Services of Supply, in North Africa and Italy.

Appropriations of $17,742,400, plus contract authorizations of $17,904,000, will finance the expanded program for this fiscal year. The Alaska Road Commission will ask the assistance of other government agencies in speeding the development of an efficient road system in the northern territory.

ASCE approves study of reinforced concrete

Creation of a council to carry out studies and experimental research in reinforced concrete, under sponsorship of the Engineering Foundation, and to interpret the results in the form of a code for the design of concrete structures, has been announced by A. B. Kinzel, chairman of the foundation's board. Such a code may permit the use of reinforced concrete in longer span structures than now considered possible and should eliminate much of the uncertainty in design.

The research will be undertaken with approval of the American Society of Civil Engineers, one of the four engineering societies that established the foundation. Two investigations have been recommended by the A. S. C. E. committee for immediate consideration by the council. The first is to be carried on at Ohio State University. Its purpose is to determine the shape of the stress block in reinforced concrete in the compression zone by means of photoelasticity. This proposed study is a continuation of pilot tests which have already been made at the university.

The second investigation is to be conducted by Prof. Richart and associates at the University of Illinois. It will be concerned with reinforced concrete members subject to combined bending and direct stress. It is proposed to build and test 126 eccentrically loaded specimens with varying eccentricity ratios, varying percentages of steel, and three different strengths of concrete.

Army engineers plan dam on Clearwater River, Ida.

Preliminary plans of Army Engineers for a storage and power dam on the Clearwater River, 58 miles above Lewiston, Idaho, provide for a concrete gravity type structure 516 ft. and 1400 ft. long at the crest.

Normal pool elevation would be about 1600 ft. above sea level, and storage capacity of the reservoir would be 4,600,000 acre-ft. with storage room for flood control 3,870,000 acre-ft.

Plans call for a power plant containing four 110,000-kw generating units, with provision for one additional unit. A salmon hatchery and necessary fish controls would be provided. The reservoir would extend upstream 52 miles.

An announcement of the plans by the Corps of Engineers explains that the project would be operated in conjunction with other reservoirs in the Columbia river and its tributaries to provide flood control.

Housing price probe brings refunds to vets

Home builders in the Washington, D. C., area have refunded $60,000 to 155 buyers of veteran's housing recently to avoid threatened investigation by the Office of the Housing Expediter.

These voluntary refunds follow authorization by Congress in July of a $2,000,000-appropriation for employment of 300 additional investigators.

The OHE has on hand 30,000 complaints from veterans from all parts of the country who claim overcharging, substitution or omission on the part of builders.

Unless there is a voluntary return of the overcharge, or a cash settlement for omitted or substituted materials, violators can be prosecuted.

MAJOR MEETINGS

American Water Works Association, Minnesota Section at Royal Alexandra Hotel, Winnipeg, Man., Canada, Sept. 1-2.

The International Society for Photogrammetry, Sixth International Photogrammetry Congress and Exhibit, The Hague, Netherlands, Sept. 1-10.

Canadian Good Roads Association, annual convention, the Pines Hotel, Digby, N. S., Sept. 7-9.

Businessmen's Conference on Urban Problems, Hotel Statler, Detroit, Mich., Sept. 13-14.

Associated General Contractors of America, mid-year meeting of Governing and Advisory Boards, Edgewater Beach Hotel, Chicago, Ill., Sept. 13-15.

Iowa Sewage Works Association, Hotel Kirkwood, Des Moines, Iowa, Sept. 14-15.

New England Water Works Assn., annual convention Hotel Pennsylvania, New York City, Sept. 14-17.

Engineer and Architects Association, Hollywood Roosevelt Hotel, Los Angeles, Calif., Sept. 24-26.

Concrete Reinforcing Steel Institute, semi-annual meeting, Grove Park Inn, Asheville, N. C., Oct. 5-9.

American Society of Photogrammetry, semi-annual meeting, Benjamin Franklin Hotel, Philadelphia, Pa., Oct. 7-8.

Southwest Section, A. W. W. Assn., Buccaneer Hotel, Galveston, Tex., Oct. 10-13.

Institute of Traffic Engineers, annual meeting, Hotel Warwick, Philadelphia, Pa., Oct. 11-13.

Building Officials Conference of America, annual meeting, Hotel New Yorker, New York City, Sept. 13-16.

Arizona Sewage & Water Works Assn., Hotel Westward Ho, Phoenix, Ariz., Oct. 15-17.

Federation of Sewage Works Associations, with annual meeting **Michigan Sewage Works Association,** Hotel Statler, Detroit, Mich., Oct. 18-21.

American Welding Society, annual meeting, Bellevue-Stratford Hotel, Philadelphia, Pa. Week of Oct. 24.

Plan air conditioning from central station

Reported to be the first project of its kind, air conditioning from a central point is being furnished to the stores, professional offices, and a motion picture theater in the 16-acre shopping center of a multi-million dollar housing project in New York City.

The installation is being made at Fresh Meadows, Queens, where, on a 170-acre tract, New York Life Insurance Co. is building a completely integrated community for 10,000 persons. It contains 3,000 apartments, including two 13-story buildings, playgrounds, landscaped lawns, garages, model shopping district, and a new public school.

Chilled water will pass through more than a mile of 12-in. pipe under a 100-psi pressure. Two 600-ton electrically driven centrifugal compressors have been installed in the central power station by Carrier Corp., Syracuse, N. Y.

Architects for the project are Voorhees, Walker, Foley & Smith, of New York, with Meyer, Strong & Jones as consulting mechanical engineers. The general contractor is the George A. Fuller Co.; J. L. Murphy, Inc., was awarded the heating and air conditioning contract.

Fishery interests oppose raising Priest River Dam

The Columbia Basin Fisheries Development Association and the Oregon Fish Commission have filed briefs with the Corps of Engineers protesting against the engineers' proposal to increase the height of the Priest River Dam project on the Columbia River.

The modification proposed by the engineers provides a dam 196 ft. high to create a pool at an elevation of 590 ft. instead of 550 ft. as provided in the original plans adopted at a hearing at Wenatchee, Wash., last May. The additional storage is proposed as a flood prevention measure.

In the fish commission's brief it is contended that the proposed 196 ft. dam would be too high for passage of fish. The pool behind the dam would, the brief recites, drown out one of the two remaining spawning pools in the main channels of the Columbia and the Snake rivers.

The state department of conservation and development, the city of Portland, Ore., the Port of Vancouver, Wash., and chambers of commerce from Yakima and Longview are among the interests which favored the project from a flood protection view.

MEN AND JOBS

Samuel D. Crute, Virginia state highway resident engineer at Amherst, will succeed **George D. Felix** as Staunton district engineer. Mr. Felix is now assistant right of way engineer with offices in Richmond. **W. M. Jeffress,** assistant resident engineer at Chatham, will relieve Mr. Crute at Amherst, and **H. G. Blundon,** construction inspector, will take the Chatham assistant residency. **S. C. Liggett,** resident engineer at Staunton, will be transferred to Harrisburg. **W. W. Shields,** resident engineer at Harrisburg, will go to Charlottesville, and **R. Cary Ambler,** resident engineer at Charlottesville, will go to Staunton.

Mr. Crute will take over the 11-county Staunton highway construction district after 25 years experience in road engineering.

John Bruce Carlock is chief consulting engineer for Loftus Engineering Corp., 610 Smithfield St., Pittsburgh 22, Pa., having just retired as chief engineer of plants for the Jones & Laughlin Steel Corp.

Robert P. Logan, for the last three years assistant professor and research specialist of the department of sanitation, Rutgers University, has joined the Dorr Co., 570 Lexington Ave., New York City, as assistant to Anthony J. Fischer, its chief sanitary development engineer.

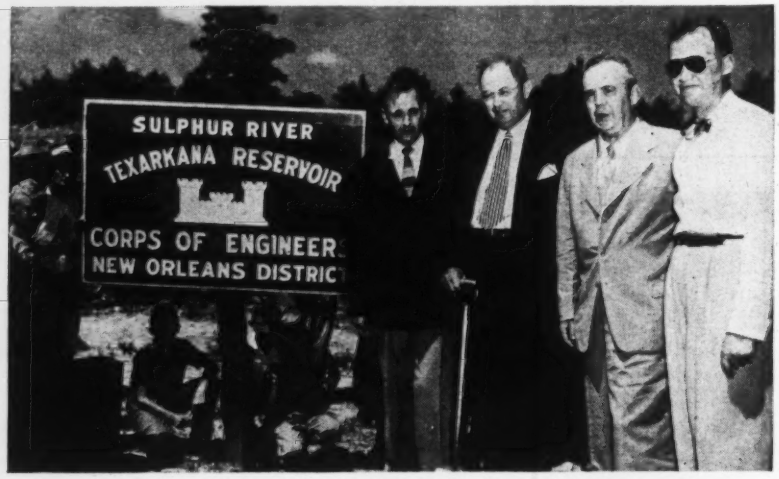
J. B. Rieman is executive secretary and chief engineer of the Kentucky Building Commission, which controls all planning and spending for state buildings.

John G. Butler is administration engineer for the Iowa State Highway Commission, **R. E. Merrill** succeeds Mr. Butler as Dist. 4 engineer at Council Bluffs.

John E. Grund, assistant city engineer, Fairmont, Minn., has been made city engineer to succeed **Frank J. Brince.** Mr. Brince has been appointed city engineer at Albert Lea, Minn.

G. A. Riedesel has resigned as head of civil engineering at the University of Idaho to manage the firm, G. A. Riedesel & Associates, consulting engineers, with headquarters in Moscow, Idaho.

Frank I. Louckes, a levee protection research man for the Memphis District, Corps of Engineers, has retired, ending 33 years of government service.



Congressman Wright Patman of Texas recently turned the first spade of earth to start construction of the $26,000,000 Texarkana reservoir as part of the development of the Sulphur River. Left to right: Lt. Col. Alvin R. Moore, assistant to the district engineer at New Orleans, Corps of Engineers; Mr. Patman; Maj. Gen. R. W. Crawford, and L. R. Matthias, secretary, Red River Valley Association. Some future voters are also interested spectators.

Inspecting the cofferdam at the Clark's Hill multi-purpose project on the Savannah River near Augusta, Ga., are, left to right, A. C. Marane, assistant resident engineer of Corps of Engineers; A. H. Davis, superintendent of the Hardaway Contracting Co., Columbus, Ga., and J. E. Crouch, inspector for the Corps of Engineers.

Edward J. Clark, chief engineer, Department of Water, Gas and Electricity, New York City, cleans up after an inspection of a section of the Catskill Aqueduct.

Jean Yves Bernier has been named chief engineer of the city of Hull, Que., replacing Col. J. P. Carriere, resigned.

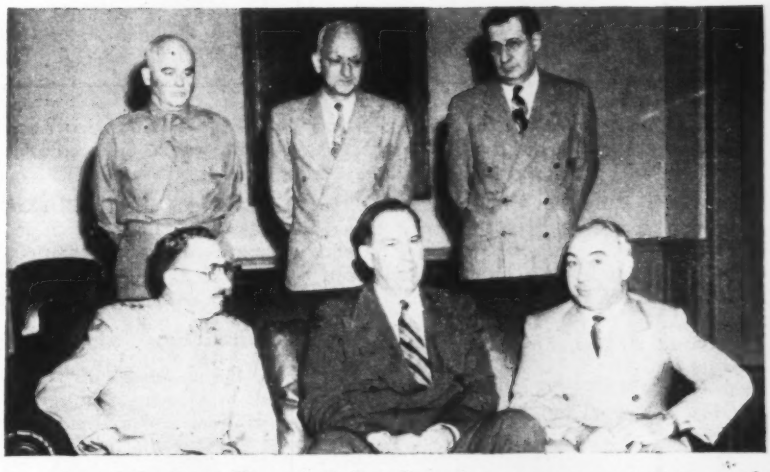
Theodore O. Blasche, formerly associated with Parsons, Brinckerhoff, Hall and Macdonald, of New York City, has joined Strobel and Salzman, also of New York.

Walter B. Bierce has been named acting construction engineer on the U. S. Bureau of Reclamation irrigation project at Tucumcari, N. M. Mr. Bierce succeeds the late William Q. Reeves, project construction engineer, who, with two other bureau employees, was killed April 30 in a cave-in on the project.

Joseph H. Lentz has resigned from his position as resident engineer for District 11 of the Pennsylvania Highways Department.

John David Kean has been named county engineer and road superintendent of Peterborough County, Ont., succeeding J. A. Fletcher.

Gaetan M. Zucco, civil engineer of Seattle, Wash., has been appointed contracting manager of the fabricated steel construction division, Bethlehem Pacific Coast Steel Corp., for the four Pacific Northwest states. A graduate of Stanford, he has been with Bethlehem since 1927, except for four years in the Army Engineer Corps, and has specialized in engineering and design work on many types of steel structures, including bridges, buildings, dams, docks and sea-walls.



Secretary of the Army Kenneth C. Royall receives a report on progress made by The Associated General Contractors of America in the Army affiliation program and compliments the local organization of the association on the results. Sitting left to right, Lieut. Gen. R. A. Wheeler, Chief of Engineers, U. S. Army; Secretary Royall; and Dwight W. Winkelman, D. W. Winkelman Co., Syracuse, N. Y., president, AGC. Standing, left to right, are Brig. Gen. Julian W. Cunningham, deputy director, Organization and Training, General Staff, U. S. Army; W. A. Snow, A.G.C. staff in charge of Affiliation Program; H. E. Foreman, managing director of the AGC.

Earl F. O'Brien, consulting engineer, Holmes, O'Brien and Gere, Syracuse, N. Y., went along with a group to inspect GE's Electronics Park at the recent meeting of the New York State Section of the American Water Works Association.

B. D. Murphy, engineering designer, will head the Design Unit for Region 6, Bureau of Reclamation, at the former Heart Mountain Relocation Center. He was in engineering design work on the bureau's Colorado-Big Thompson project.

W. I. English, resident engineer of the VA hospital at Buffalo, N. Y., stands amid the piping and air-conditioning ducts that caused some construction headaches.

Two California consulting engineers watch the big lining machines in action on the Friant-Kern canal. From San Francisco at an ASCE convention is G. B. Woodruff and from Los Angeles is Donald R. Warren.

At the site of Friant Dam, Calif., are S. B. Morris (left), general manager and chief engineer of Los Angeles Department of Water and Power, and Fred C. Scobey, developer of the Scobey formula.

ENGINEERING SCHOOLS

N.Y.U. has three water and sewage projects — Georgia Tech changes its name — Faculty news

The research division of the college of engineering at New York University is engaged in 20 projects, including three dealing with water and sewage. A sewage chlorination project, sponsored by Wallace & Tiernan Corp., Newark, N. J., and directed by Rolf Eliassen and H. L. Krieger, involves studies of the effect of initial mixing of chlorine and sewage to kill coliform bacteria.

A water coagulation research project sponsored by the U. S. Army Research Service, is under the direction of Mr. Eliassen and Martin Wolin. The objective is to study the efficiency of various methods for removing viscid or semi-solid masses from water. Samples are taken from all sections of the country and by systematic analysis it is possible that new and better methods may be evolved for treating field water to be used for drinking purposes.

Cloroben Corp. of Jersey City, N. J., is sponsoring a sewage sludge digestion project under the direction of Mr. Eliassen and T. A. Jaffee to determine the exact time when cloroben should be added to sewage and the proper quantity of cloroben required in order to get the maximum amount of gas from the sewage.

A second part of the research seeks to learn whether cloroben can be substituted for chlorine in bleaching agents and in disinfectants and the efficiency of such a substitution. Cloroben is much cheaper than chlorine and industry could effect important economies if the substitution were found to give satisfactory results.

Foreign Students

The department of civil engineering, University of Illinois, during the last academic year awarded 78 master's degrees in civil engineering and two in sanitary engineering, and has awarded nine doctor's degrees in civil engineering. There are 50 foreign students enrolled in the department of civil engineering, representing many countries, one of the largest contingents being from Turkey.

Summer Work

Sardis Dam, recreation mecca of North Mississippi, this summer was an open air classroom for engineering surveying classes of the University of Mississippi. Under the direction of F. H. Kellogg, professor of civil engineering, students took a course in elementary surveying during the first six-week period and studied construction surveying during the second period.

For Examinations

To extend the usefulness of its evening division to graduate engineers of the upper Hudson region, Rensselaer Polytechnic Institute with the fall term will offer two courses especially designed to prepare engineers for the semi-annual New York State licensing examinations.

Faculty Changes

Faculty changes include the following: Boris W. Boguslavsky has resigned from the University of Akron and is now professor of architectural engineering at the Georgia Institute of Technology; Thurmel McMahon, assistant at the Columbia University school of engineering, is now assistant professor of civil engineering at the University of Kansas; Samuel C. Williams, engineering consultant to Scudder, Stevens & Clark, New York, is now an associate professor in the department of economics of engineering at Stevens Institute of Technology; Nephi Albert Christensen, dean of engineering at Colorado A. & M. College has been appointed director of the school of civil engineering at Cornell University; George F. Branigan, of Iowa State College, has been appointed dean of the college of engineering at the University of Arkansas; Forrest H. Hall and W. W. Tinniswood, formerly assistant professors in civil engineering at the University of Idaho, have been advanced to associate professorships; Paul E. Pickett, has been appointed assistant director of the Engineering Extension Division of North Carolina State College at Raleigh; the college of engineering of the University of Florida has appointed Harold W. Morrow, formerly instructor at the University of South Dakota, as instructor in mechanics, and Karl W. Reber, formerly instructor at Oklahoma A. and M., as instructor in mechanical engineering.

MIT to Expand

Karl T. Compton, president of Massachusetts Institute of Technology, recently outlined plans for a $30,000,000 expansion program. He said projects recently completed, now under construction or soon to be started total $9,000,000. In addition the institute is planning new laboratories for hydrodynamics, metal processing, and nuclear science and engineering.

New Name

The faculty and administration of the Georgia School of Technology, Atlanta, have announced a change of name to the Georgia Institute of Technology.

CONSTRUCTION experience is being gained by engineering students of Valparaiso University, Valparaiso, Ind., this summer in helping to construct their new engineering building. When sufficient funds were not available they pitched in and helped raise money, obtained supplies, and did actual physical work at 50 cents an hour, having persuaded 11 Northern Indiana AFL unions to waive claims for union labor on the job. When completed the new facilities will enable the university to give full 4-year courses in engineering.

OBITUARY

Francis B. Watkins, 61, for the last two years principal sanitary engineer of the Pennsylvania Department of Health, died at Harrisburg Aug. 17. He was a 1909 graduate of Lafayette College. Formerly he was a consulting engineer with the state Department of Commerce, helping with the industrial problems relating to stream pollution.

Harry S. Dickson, 77, a retired civil engineer and partner in the real estate firm of Dickson & Redding, died Aug. 17 in Washington, D. C. He received a degree in civil engineering from the University of Edinburgh. Before world war I, he was an assistant assessor of railroads and canals in Scotland. In Canada he was a principal surveyor and engineer with the Canadian Pacific Railroad. He came to the United States in 1923 and was a construction engineer in New York before moving in 1931 to Washington, where he was employed with the National Park Service and the War Department until his retirement three years ago.

Frank D. Jackson, 80, retired city engineer of Buffalo, N. Y., died Aug. 7. A graduate of Cornell University, he was in the city engineering division for 25 years, and had been in charge of the work on the city's waterways and bridges.

James E. Trowbridge, 73, a retired general contractor, died July 31 in Salt Lake City, Utah. He was an expert in erecting and lining assay furnaces. He directed erection of the Eccles and Kiesel buildings in Ogden, Utah, and the Hawthorne school, Atlas building and the West high school technical building in Salt Lake City. He also built the University of Utah mines building, the Utah Copper Co. precipitation plant, Bingham, and numerous other large projects.

Audley W. Frederick, 54, a Florida state civil engineer, died Aug. 5. From 1923 to 1929 he was the civil engineer of Collier County. He had been connected with the Florida road department since 1932.

Herbert D. Stephens, 51, engineer for the Carrier Construction Co. of Chicago, for the last six years making his headquarters in Cleveland, Ohio, died Aug. 5 in that city. He was identified with the building of numerous industrial and munition plants in northern Ohio, including the Goodrich Tire and Rubber Co. laboratory near Brecksville.

Robert W. T. Christiansen, 92, retired Chicago building contractor, died August 10. His son, Roy T. Christiansen, is city building commissioner of Chicago.

Maurice A. Trusty, Sr., 47, died July 31, at Evansville, Ind. A graduate of Kentucky University, 1927, Mr. Trusty was associated with the firm of Earl E. Ferguson & Associates, engineers and surveyors in Evansville.

Gilbert L. Wilcox, 50, former city manager of Dover, Del., died Aug. 16 in Philadelphia, Pa. City manager of Dover from 1943 until his resignation in August, 1947, Mr. Wilcox had previously been a construction engineer for United Engineers and Constructors of Philadelphia. Since leaving his Dover position, Mr. Wilcox had been associated with Burns and Roe, consulting engineers, New York.

Scott B. Lilly, 63, head of the engineering division at Swarthmore College since 1929, died at Swarthmore, Pa., Aug. 19. A graduate in civil engineering from Michigan State College, and Cornell, in 1907, Prof. Lilly taught first at Cornell and then at Swarthmore from 1910 until the start of World War I when he became assistant plant engineer for the Merchant Shipbuilding Corp. After the war he continued consulting and later in sales work until his return to Swarthmore in 1929. During World War II Prof. Lilly was active in arbitration work for war industries in the Philadelphia area. He served as a director of the ASCE 1942-44, and was serving as one of that society's representatives on the Engineers' Council for Professional Development at the time of his death.

Ervin B. Stevenson, Albany, N. Y., engineer, died Aug. 16. He was a graduate of the 1907 class of RPI, where he received a civil engineering degree. He began with Foundation Co., New York, and later was Albany deputy city engineer. He organized E. B. Stevenson Inc. in 1932.

David J. Summerville, secretary of the Wisconsin State Highway Commission since 1943 died Aug. 15 at Madison. From 1925 to 1943, he was highway commissioner of Rusk County.

CONSTRUCTION ACTIVITY

CONTRACT VOLUME

Continental U. S. Only
(Thousands of Dollars)

	Week of Aug. 26 1948	Cumulative 1948 (35 wks.)	Cumulative 1947 (35 wks.)
Federal	$6,759	$679,609	$453,073
State & Mun.	48,458	1,716,391	1,139,996
Total Public.	$55,217	$2,396,000	$1,593,069
Total Private	39,974	2,211,380	2,018,528
U. S. Total.	**$95,191**	**$4,607,380**	**$3,611,597**

WHERE CONSTRUCTION ACTIVITY ORIGINATED THIS WEEK

Dollar Volume (Thousands)

Type of Work	This Week	Cumulative 1948 (35 wks.)	Cumulative 1947 (35 wks.)
Waterworks ...	$1,858	$131,612	$73,981
Sewerage	3,857	153,440	90,515
Bridges	7,223	197,852	115,876
Highways	11,051	699,402	544,238
Earthwork, Waterways	12,460	350,910	198,740
Buildings, Public	15,281	714,521	390,202
Industrial ...	9,768	649,978	560,376
Commercial ..	22,069	1,262,811	1,166,666
Unclassified ...	11,624	446,854	471,003

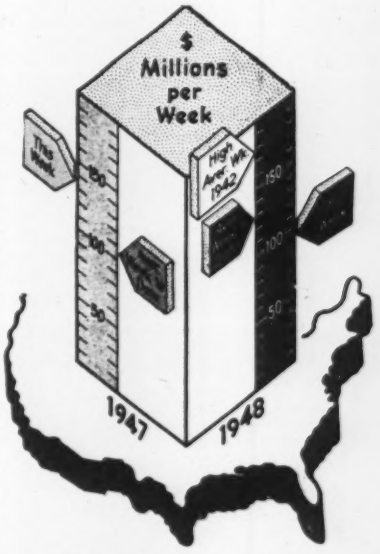
NOTE: Minimum size projects included are: Waterworks and waterway projects, $28,000; other public works, $50,000; industrial buildings, $68,000; other buildings, $250,000.

NEW PRODUCTIVE CAPITAL

	Cumulative 1948 (35 wks.)	Cumulative 1947 (35 wks.)
NON-FEDERAL	$3,371,793	$1,549,664
Corporate Securities	1,673,468	540,199
State and Municipal	1,206,036	761,754
Fed. Aid Highway.	427,289	247,711
U. N. Building Loan	65,000	.....
FEDERAL	1,558,932	818,729
Total Capital	**$4,930,725**	**$2,368,393**

ENR INDEX NUMBERS

Index Base = 100		1913	1926
Construction Cost..	Aug. '48	475.51	228.58
Building Cost	Aug. '48	355.45	192.15
Volume	July '48	266	117



As Reported this week to ...
Engineering News-Record

CONSTRUCTION REPORTS

Bids Asked—Low Bidders—Contracts Awarded—First Section

Compiled by Business News Department—Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.

ELSIE EAVES, Manager *J. A. MAHONEY, Reports* *E. R. BIGGERSTAFF, M. R. ROESSLER, Statistics*

WATER SUPPLY

BIDS ASKED

Bids Asked August 31

S. C., Laurens—City, exten. water distr. sys. Plans deposit $10. Wiedeman & Singleton, C. & S. Natl. Bank Bldg., Atlanta, Ga., engrs. CD 7/26/46—ENR 8/8/46.

Bids Asked September 2

†Miss., Mound Bayou—U. S. Eng., P. O. Box 60, Vicksburg, test well at site of U. S. Veterans Hospital, Serial No. Eng. 22-052-49-37.

Bids Asked September 3

Miss., Bay Springs—Town, exten. water distr. sys. and drilling well. Plans deposit $15. W. E. Johnson, **First Federal** Savings & Loan Assn. Bldg., Jackson, engr.

Bids Asked September 7

Wis., Altoona—City, 11,000 ft. 6 in. WW sys. Plans deposit $15. Bids 8/3 rejected. CD 7/21—ENR 7/29.

Bids Asked September 14

Tex., Amarillo—City, N. V. Moss, city mgr., high service pumping station. $75,000. Plans deposit $15. Tentative date. Freese & Nichols, 407 Danciger Bldg., Fort Worth, engrs. CD 8/22/46.

Bids Asked About September 25

O. Toledo—City, G. Van Dorp, comr., water sys., motor and pumping unit for Collins Park high pressure pump. station. $252,473. Plans deposit $10. Gresley & Hansen, 220 S. State St., Chicago, Ill., engrs. CD 8/4—ENR 8/19.

LOW BIDDERS

Minn., Duluth—City, C. D. Jeronimus, clk., rejected bids July 8, concrete reservoir. L.B. $342,195. CD 6/16—ENR 6/24.

N. D., Maddock—City, rejected bids July 12, water distr. and elevated steel tank. L.B. $171,124. CD 7/28—ENR 8/5, under L.B.

Okla., Frederick—City, standpipe, or elewatermain extens. addnl. supply for Fort Gibson. Est. **$40,000. (Correction**—Status of project). CD 6/16—ENR 6/24, under CA.

Tex., Houston—Harris County Water Control & Imprvt. Dist. 15, c/o Dr. S. W. Shipman, No. 1 Wynden Dr., Aug. 5, Contr. 2, 50,100 lin. ft. 2- to 12-in. c. i. pipe from Gerald Mora, 312 Sabine St., **$203,320**; Contr. 3, 75,000 gal. elevated steel tank, from Pittsburgh-Des Moines Steel Co., Praetorian Bldg., Dallas, **$21,440**; 100,000 gal. elevated steel tank, from Chicago Bridge & Iron Works, 5625 Clinton Dr., **$25,170.** Frank J. Metyko, Scanlan Bldg., engr.

Tex., Longview—City, Aug. 2, intake unit at Cherokee Lakesite, from Henry C. McDonald, Kilgore. **$86,000.** CD 7/22.

Wash., Kelso—City, City Hall, pumphouse and filter plant, from Utility Constr. Co., Puget Sound Bank Bldg., Tacoma. **$67,675.** C. O. Mannes, city engr. CD 10/13—ENR 10/16.

CONTRACTS AWARDED

Conn., Bethel—Town, Thomas H. Mannion, chn. Bd. Water Comrs., 116 Greenwood Ave., 13x28 ft. brick well house, 13x26 ft. chlorinator house, 3,700 ft. 10 and 12 in. c.i. asbestos cement watermain, cleaning, lining 2,500 ft. 10 in. c.i. pipe, to Northwood Contractors, 90 Lafayette St., Stamford. **$46,750.** Bids 7/29. CD 7/21.

Conn., Shelton—State, F. R. Zeller, comptroller, State Capitol, Hartford, WW sys. for fire protection, incl. steel water tower, hydrants, piping, etc., Laurel Heights Sanatorium, to Ideal Plumbing & Heating Co., 174 Orchard St., New Haven, **$51,950**; fire alarm sys., to Stephen Fainer, 74 Colony St., Ansonia, **$20,785.** Bids 8/4. CD 7/26—ENR 7/29.

Mass., Byfield—Town, Water Dpt., Town Hall, fittings for water services, pipes, hydrants, valves, etc., to Keasbey & Mattison, 258 Park Square Bldg., Boston. **$42,900.** Bids 7/6, awarded 8/6. CD 6/18—ENR 7/10.

O., Wellsville — City, Charles A. Lewis, Safety Service Dir., 5 or more dams along Little Yellow Creek protecting municipal water sys., own forces, under supervision R. H. Hunter, consult. engr., Wooster.

Okla., Frederick — City, standpipe, or elevated storage water reserve, to Pittsburgh-Des Moines Steel Co., Neville Island, Pittsburgh, Pa., **$53,500.** CD 7/30.

Okla., Miami—City, 1 m.g. elevated steel storage tank for Miami Water Dpt., to Pittsburgh-Des Moines Steel Co., Praetorian Bldg., Dallas Tex. **$132,790.** Est. $135,000. C. C. Pate, Richards Bldg., Tulsa, engr.

Tex., Beaumont—City, c.i. watermains and lateral reconstruction, replacement, force account. **$38,000.** Clyde Black, city engr. CD 6/6/47—ENR 6/26.

Wis., Ripon—Wisconsin Power & Light Co., 122 W. Washington St., Madison, water tower, 300,000 gal. tank, 115 ft. high, to Chicago Bridge & Iron Co., 332 S. Michigan St., Chicago, Ill. Est. **$50,000.**

N. S., Digby—Municipality, installing 12 in. watermain from Lily Lake, to Camby, Ltd., New Glasgow, **$48,500.** Est. $50,000. Awarded 8/13. Harold C. Loring Assoc., Ltd., Digby, engr. CD 3/2—ENR 3/18.

SEWERS, WASTE DISPOSAL

BIDS ASKED

Bids Asked September 3

Miss., Bay Springs—Town, imprv. sanitary sewer, Plans deposit $15. W. E. Johnson, First Federal Savings & Loan Assn. Bldg., Jackson, engr. CD 7/27/45—ENR 8/9/45.

Bids Asked September 3

Wis., Madison—City, intercepting sewer in Blount St. and E. Washington Ave. Mead & Hunt, 550 State St., engrs. CD 2/12/45—ENR 2/22/45.

Bids Asked September 8

N. Y., Oxford — Bureau Contracts & Accounts, Albany, sewage disposal plant, New York State Womens Relief Corps. Home. Plans deposit $15.

Bids Asked September 10

Ill., Kankakee—City, City Clk., City Hall, Part 1, sanitary sewers in Riverview and Country Club Dists., $152,000; Part 2, imprv. intercepting sewerage sys., $67,700; Part 3, rehabilitation Station Street Sewer, $94,300; Part 4, rehabilitation River Street storm and outfall sewer, $12,500; Part 5, relief and combined sewers in Central and Steuben Dists., $221,200; Part 6, sanitary sewers in Central Dist., $82,000; Part 7, sewer extens. in Lincoln and Mound Grove Dists., $52,000. Warren & Van Praag, Inc., 253 S. Park St., Decatur, engrs. CD 5/19—ENR 5/29.

Bids Asked September 13

Tex., Electra—City, Leo Morre, mayor, sanitary sewer extens. $60,000. Plans deposit $10. Tentative date. Freese & Nichols, 407 Danciger Bldg., Fort Worth, engrs. CD 12/8/47—ENR 12/11/47.

Bids Asked September 14

Calif., Irvington—Irvington Sanitary Dist., 103, Mission St., sewage treatment plant. Over $50,000. Plans deposit $25. CD 12/22/47—ENR 1/8/48.

PROJECTS COVERED

Projects—By Size

Construction projects here reported cover the United States and Canada, are of these minimum sizes or larger: water supply, earthwork, waterworks $28,000; other public works $50,000; industrial buildings $68,000; other buildings $250,000.

Classes of Construction

(Name in order of Listing)

Water Supply	Latin America
Sewers, Waste Disposal	Public Buildings
Bridges	Commercial Buildings
Streets & Roads	Industrial Buildings
Earthwork, Waterways	Unclassified

Stages Reported

PROPOSED WORK: Including appointment of engineers or architects.

BIDS ASKED (new announcements only). For full calendar, see also preceding issues of ENR.;

LOW BIDDERS: On jobs below $500,000 value all low bidder news will be the final reports published on the projects involved except where award is not made to the low bidder. In this case, a supplementary contract award report will be published.

CONTRACTS AWARDED: Except awards to low bidders previously reported in low bidder stage.

Dates shown are of issue in which last previous report was published.

Symbols and Abbreviations Include:

†	Federal Government
●	Project of $1,000,000 or over.
ENR	Engineering News-Record
CD	Engineering News-Record Construction Daily

Bids Asked September 15

Ont., Cobourg — Municipality, sewage disposal plant, $225,000. C. B. Saunders, town engr.

Bids Asked September 21

Tex., Amarillo—City, N. V. Moss, city mgr., approx. 6 mi. 24-to 36-in. outfall sewers. $300,000. Plans deposit $25. Tentative date. Freese & Nichols, 407 Danciger Bldg., Fort Worth, engrs. CD 8/2/45—ENR 8/23/45.

Bids Asked September 27

N. Y., Altamont—Town Clk., Town Hall, Maple Ave., filter plant, sewage treatment plant, etc. Plans deposit $5. Extended date. Benjamin L. Smith & Assoc., N. Pearl St., Albany, engr. CD 8/11—ENR 8/19.

Bids Asked October 12

Mich., Detroit—Dpt. P. Wks., 104 City Hall, approx. 3.6 mi. 14 ft. cylinder at upper end to double box each 14x12 ft. sewer (4 contracts.) Contr. PW 252-255. Over $50,000. Plans deposit $15 each, or $50 4 contracts. CD 8/25/44—ENR 9/7/44.

LOW BIDDERS

●Ill., Chicago—Sanitary Dist., 910 S. Michigan St., Aug. 12, West-Southwest Sewage Treatment Wks., Div. Re., from Kenny-McHugh Co., 434 S. Clark St., **$531,625**; 5 ft. 3 in. and 5 ft. 10 in. internal width concrete Evergreen Outfall Sewer, from M. J. Boyle & Co., 2480 N. Elston Ave., **$2,174,584.** CD 7/30—ENR 8/5.

La., Mansfield—Town, rejected bids Aug. 10, outfall line and sewage disposal plant. L. B. **$158,934.** CD 8/17—ENR 8/19, under LB.

Minn., St. Paul—City, J. J. McDevitt, purch. agt., Aug. 3, Moses-Belle Trunk Storm Sewerage Sys., from F. Serratore, 1766 E. 7 St., **$102,198.** CD 7/27.

New York—Bureau Contracts & Accounts, The Governor Alfred E. Smith State Office Bldg., Albany, cancelled bids to have been opened Aug. 18. 2.33 mi. storm sewer, Yonkers-White Plains Hy., Westchester Co. Will readvertise. CD 7/27—ENR 8/5.

Ore., Medford—City, City Hall, 1,936 ft. storm sewers from Warner & Jeske, 49 2 Park Ave., Eugene, **$82,111.** Est. $75,497. Harvey & Watkins, Goldy Bldg., engrs. CD 8/1/45—ENR 8/9/45.

S. D., Milbank—City, Aug. 6, sewage plant, from Solem Constr. Co., Madison, **$165,575.** Perkins & McWayne, Sioux Falls, engrs. CD 5/20—ENR 6/10.

Tex., Houston—Harris County Water Control & Imprvt. Dist. 15, c/o S. W. Shipman, No. 1 Wynden Dr., Aug. 5, Contr. 1, 47,000 lin. ft. 6- to 21-in. sanitary sewer lines from Gerald Mora, 312 Sabine St., **$157,935,** est. $170,000; Contr. 4, sewage treatment plant, from A. S. Koehler, Shell Bldg. **$46,426,** est. $50,000. Frank J. Metyko, Scanlan Bldg., engr.

Wash., Kennewick—City, City Hall. Beach St. trunk sewer, from State Constr. Co., 1750 19 Ave. S. Seattle, **$70,645.** R. H. Corey, Corbett Bldg., Portland, Ore., engr.

Ont., Paris—Town, W. J. Hagget, clk., July 12, approx. 10 mi. sewers, sewage treatment plant, from Dumfries Constr. Co., Ltd., 3 Water St., Galt, Approx. **$450,000.** CD 6/28—ENR 7/1.

CONTRACTS AWARDED

Calif., Los Angeles—Bd. P. Wks., 153 City Hall, sanitary sewers in Fair Ave. and California St. Sewer Dist., to Matt J. Zaich, 6828 Farmdale St., North Hollywood, **$107,827.** Est. $136,000. Bids 8/4, awarded 8/11. CD 7/26.

Idaho, Boise—City, City Hall, blower equip. for sewage disposal plant, to **Lang** Co., Inc., 267 W. 1 St., Salt Lake City, Utah, **$58,657.** Bids 7/28. CD 6/29—ENR 7/1.

Ia., Glenwood—City, V. E. Harris, clk., sanitary sewers, to Peter N. Kruse, Spencer, Ia., **$50,089.** Bids 8/10. CD 8/3—ENR 8/5.

Miss., Oxford—City, imprv. sanitary sewer. Owner builds, Over **$60,000.** CD 8/9, under LB.

†Tex., Fort Sam Houston—U. S. Eng., Fort Sam Houston, sanitary sewer modernization and replacement portions, to R. E. Lanham Constr. Co., 715 E. Josephine St., San Antonio. Approx. **$50,000.** CD 7/31—ENR 8/21/47.

Wash., Kennewick—City, City Hall, Highland St. trunk sewer, to Hansen & Parr, W. 232 Pacific St., Spokane, **$90,804.** Bids 8/10. CD 7/29.

Wis., Fond du Lac—City, general construction sewage treatment plant, to Charles D. Smith & Son, Inc., Hy. 23 East and Thomsen-Abbott Constr. Co., **Marshfield, $839,545.** Bids 7/13, awardd 8/6. CD 7/21—ENR 7/29, under LB.